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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,766	03/19/2004	Toshie Imai	MIPFP057.CIP	7669

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EXAMINER

KHAN, USMAN A

ART UNIT	PAPER NUMBER
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2622

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12/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/804,766	Applicant(s) IMAI, TOSHIE	
	Examiner USMAN KHAN	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 11, 15, 25 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 11, 15, 25 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/29/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed on 09/08/2008 with respect to claims 1, 15, and 29 have been considered but are moot in view of the new ground(s) of rejection.

Regarding objection to claim 1 provided in the previous office action. Applicant has amended claim 1 to overcome the objection to claim 1.

The examiner notes that the applicant has canceled withdrawn claims 2 – 8, 12, 13, 16 – 22, 26, and 27 in the arguments filed on 09/08/2008.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 15, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (US patent No. 6,097,836) in view of Iguchi et al. (US PgPub No. 2001/0007599).

Regarding **claim 1**, Inoue teaches an image processing device for processing an image using image data generated by an image generating device (column 3 line 38 et seq. the image processing system with captured images is used as an indication image data of light source colors and snowy scenery), and image generation record

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information that is associated with the image data and that includes operation information for the image generating device at the time that the image data is generated (column 3 line 38 *et seq.* image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight), the image processing device comprising:

a judging section configured to execute a backlight decision as to whether or not to execute backlight adjustment processing, based on both the image generation record information and the image data (column 3 line 38 *et seq.* the captured image is used as an indication image data of light source colors and snowy scenery and image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight), the judging section performing

(i) a first judgment to decide whether or not the image generation record information negates necessity of the backlight adjustment processing (column 3 line 38 *et seq.* image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight if needed), and

(ii) a second judgment, in case the image generation record information does not negate the necessity of the backlight adjustment processing in the first judgment, to decide based on a pixel value histogram of the image data whether or not to execute the backlight adjustment processing (column 13 line 47 column 14 line 6, column 16 lines 7 – 23, and column 17 lines 41 – 53, histogram created from captured image used for correcting backlight brightness/shadow), and the judging section calculating a degree of similarity between the pixel value histogram a predetermined reference value

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(column 4 lines 3 – 7, column 6 lines 53 – 64, column 5 lines 48 – 55, and figure 13 LUT uses reference values which are values of correction and compares it to the captures image with histogram as taught in column 5 lines 48 – 55, column 13 line 47 column 14 line 6, column 16 lines 7 – 23, and column 17 lines 41 – 53, histogram created from captured image used for correcting backlight; note the LUT can be considered a predetermined histogram because the LUT values are matched with the input histogram values for backlight correction), and making the second judgment according to the degree of similarity (column 6 lines 53 – 64); and

an image quality adjuster that, in case it is decided to execute the backlight adjustment processing, executes backlight adjustment processing to increase brightness value of at least some pixels in the image data (column 6 lines 37 – 65 and column 7 lines 47 – 55).

However Inoue fails to teach that the predetermined reference value is a predetermined reference histogram representing a backlit image.

Iguchi et al., on the other hand teaches that the predetermined reference value is a predetermined reference histogram representing a backlit image.

More specifically, Iguchi et al. teaches that predetermined reference value is a predetermined reference histogram representing a backlit image (paragraphs 0122 - 0125).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Iguchi et al. with the teachings of Inoue because as stated in paragraphs 0114 - 0026 Iguchi et al. teaches that using the

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invention various erroneous conditions can be corrected in an image hence improving image quality).

Regarding **claim 15**, Inoue teaches a method of processing an image using image data generated by an image generating device (column 3 line 38 *et seq.* the image processing system with captured images is used as an indication image data of light source colors and snowy scenery), and image generation record information that is associated with the image data and that includes operation information for the image generating device at the time that the image data is generated (column 3 line 38 *et seq.* image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight), the method comprising:

executing a backlight decision as to whether or not to execute backlight adjustment processing, based on both the image generation record information and the image data (column 3 line 38 *et seq.* the captured image is used as an indication image data of light source colors and snowy scenery and image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight), the executing of the backlight decision including

(i) performing a first judgment to decide whether or not the image generation record information negates necessity of the backlight adjustment processing (column 3 line 38 *et seq.* image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight if needed); and

(ii) performing a second judgment, in case the image generation record information does not negate the necessity of the backlight adjustment processing in the first judgment, to decide based on a pixel value histogram of the image data whether or not to execute the backlight adjustment processing (column 13 line 47 column 14 line 6, column 16 lines 7 – 23, and column 17 lines 41 – 53, histogram created from captured image used for correcting backlight brightness/shadow), and the executing of the backlight decision further including calculating a degree of similarity between the pixel value histogram and a predetermined reference value (column 4 lines 3 – 7, column 6 lines 53 – 64, column 5 lines 48 – 55, and figure 13 LUT uses reference values which are values of correction and compares it to the captures image with histogram as taught in column 5 lines 48 – 55, column 13 line 47 column 14 line 6, column 16 lines 7 – 23, and column 17 lines 41 – 53, histogram created from captured image used for correcting backlight; note the LUT can be considered a predetermined histogram because the LUT values are matched with the input histogram values for backlight correction), and making the second judgment according to the degree of similarity (column 6 lines 53 – 64); and

in case it is decided to execute the backlight adjustment processing, executing backlight adjustment processing to increase brightness value of at least some pixels in the image data (column 6 lines 37 – 65 and column 7 lines 47 – 55).

However Inoue fails to teach that the predetermined reference value is a predetermined reference histogram representing a backlit image.

Iguchi et al., on the other hand teaches that the predetermined reference value is a predetermined reference histogram representing a backlit image.

More specifically, Iguchi et al. teaches that predetermined reference value is a predetermined reference histogram representing a backlit image (paragraphs 0122 - 0125).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Iguchi et al. with the teachings of Inoue because as stated in paragraphs 0114 - 0026 Iguchi et al. teaches that using the invention various erroneous conditions can be corrected in an image hence improving image quality).

Regarding **claim 29**, Inoue teaches a computer-readable storage medium encoded with a computer program (column 5 lines 17 – 20), the computer program comprising:

a first program causing a computer to execute a backlight decision as to whether or not to execute backlight adjustment processing, based on both the image generation record information and the image data (column 3 line 38 *et seq.* the captured image is used as an indication image data of light source colors and snowy scenery and image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight), the first program causing the computer to perform

(i) a first judgment to decide whether or not the image generation record information negates necessity of the backlight adjustment processing (column 3 line 38 et seq. image processing system using a variety of characteristics such as RGB and other image data of the input image for correction of backlight if needed), and

(ii) a second judgment, in case the image generation record information does not negate the necessity of the backlight adjustment processing in the first judgment, to decide based on a pixel value histogram of the image data whether or not to execute the backlight adjustment processing (column 13 line 47 column 14 line 6, column 16 lines 7 – 23, and column 17 lines 41 – 53, histogram created from captured image used for correcting backlight brightness/shadow), and the first program further causing the computer to calculate a degree of similarity between the pixel value histogram and a predetermined reference value (column 4 lines 3 – 7, column 6 lines 53 – 64, column 5 lines 48 – 55, and figure 13 LUT uses reference values which are values of correction and compares it to the captures image with histogram as taught in column 5 lines 48 – 55, column 13 line 47 column 14 line 6, column 16 lines 7 – 23, and column 17 lines 41 – 53, histogram created from captured image used for correcting backlight; note the LUT can be considered a predetermined histogram because the LUT values are matched with the input histogram values for backlight correction), and to make the second judgment according to the degree of similarity (column 6 lines 53 – 64); and

a second program, in case it is decided to execute the backlight adjustment processing, causing the computer to execute backlight adjustment processing to increase brightness value of at least some pixels in the image data (column 6 lines 37 –

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65 and column 7 lines 47 – 55; note first and second program can be considered portions of a program since the applicant has not claimed different programs).

However Inoue fails to teach that the predetermined reference value is a predetermined reference histogram representing a backlit image.

Iguchi et al., on the other hand teaches that the predetermined reference value is a predetermined reference histogram representing a backlit image.

More specifically, Iguchi et al. teaches that predetermined reference value is a predetermined reference histogram representing a backlit image (paragraphs 0122 - 0125).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Iguchi et al. with the teachings of Inoue because as stated in paragraphs 0114 - 0026 Iguchi et al. teaches that using the invention various erroneous conditions can be corrected in an image hence improving image quality).

Claim 11 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (US patent No. 6,097,836) in view of Iguchi et al. (US PgPub No. 2001/0007599) in further view of Tretter (US patent No. 6,463,173).

Regarding **claim 11**, Inoue in view of Iguchi et al. teaches most of the limitations of claim 1, However Inoue in view of Iguchi et al. fails to teach that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel

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frequency value is established for each segment; and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram.

Tretter, on the other hand teaches that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel frequency value is established for each segment; and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram.

More specifically, Tretter teaches that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel frequency value is established for each segment (figures 7 - 8 and column 3 line 59 – column 4 line 26); and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram (figures 7 - 8 and column 3 line 59 – column 4 line 26).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Tretter with the teachings of Inoue in view of Iguchi et al. because as stated in column 3 line 47 – column 4 line 27 Tretter teaches that the use of the dividing of the histogram into clusters for processing will result in a improved image.

Regarding **claim 25**, Inoue in view of Iguchi et al. teaches most of the limitations of claim 15, However Inoue in view of Iguchi et al. fails to teach that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel frequency value is established for each segment; and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram.

Tretter, on the other hand teaches that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel frequency value is established for each segment; and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram.

More specifically, Tretter teaches that the pixel value histogram and the reference histogram each have a simplified format in which a range of pixel values is divided into a plurality of segments, and a representative pixel frequency value is established for each segment (figures 7 - 8 and column 3 line 59 – column 4 line 26); and the degree of similarity represents similarity of the representative pixel frequency value of each segment between the pixel value histogram and the reference histogram (figures 7 - 8 and column 3 line 59 – column 4 line 26).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Tretter with the teachings of Inoue in

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view of Iguchi et al. because as stated in column 3 line 47 – column 4 line 27 Tretter teaches that the use of the dividing of the histogram into clusters for processing will result in a improved image.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Thru 6:45-4:15; Fri 6:45-3:15 or Alt. Fri off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Usman Khan/

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Supervisory Patent Examiner, Art
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Usman Khan
12/10/2008
Patent Examiner
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